

forming a silicon nitride film containing at least one of hydrogen and oxygen over a substrate;
depositing a semiconductor film comprising amorphous silicon on said silicon nitride film;
disposing a metal in contact with at least a selected portion of said semiconductor film;
heating said semiconductor film and said metal to crystallize said semiconductor film wherein crystals grow through said semiconductor film in a horizontal direction with respect to said [substate] substrate in a region adjacent to said selected portion; and then annealing said semiconductor film by utilizing a light from a lamp to improve the crystallinity thereof;
wherein said annealing is carried out in such a manner that a temperature of a monitored single crystal silicon wafer is raised at a rate of 50 to 200°C/s and cooled at a rate of 20 to 100°C/s and the step of heating is carried out so that the crystallized semiconductor film does not have a (111) plane orientation.

H2 ⁷ 74. (Amended) A method according to claim ⁵ 72 wherein said metal compound is selected from the group consisting of nickel bromide, nickel acetate, nickel oxalate, nickel carbonate, nickel chloride, nickel iodide, nickel nitrate, nickel sulfate, nickel formate, nickel acetylacetonate, nickel 4-cyclohexybutyrate, [nickel oxide] and nickel hydroxide.

REMARKS

The Office Action of June 22, 2000 has been carefully studied.